Measurement Review

Name_____

Hour_____

Define:

1. Area _____
2. Linear _____
3. Pressure _____
4. Volume _____
5. Density _____
6. Mass _____
7. Weight _____

What unit labels are used for:

8. Area _____
9. Linear _____
10. Pressure _____
11. Solid Volume _____
12. Liquid Volume _____
13. Density _____
14. Mass _____
15. Weight _____

Using the figure, answer the following questions:
Don't forget labels for your numbers!

16. Length _____
17. Width _____
18. Height _____
19. Bottom surface area _____
20. Back surface area _____   mass= 206 grams
21. Left side surface area _____   weight=2.1 N
22. TOTAL surface area _____
23. Volume _____
24. Mass _____
25. Density _____
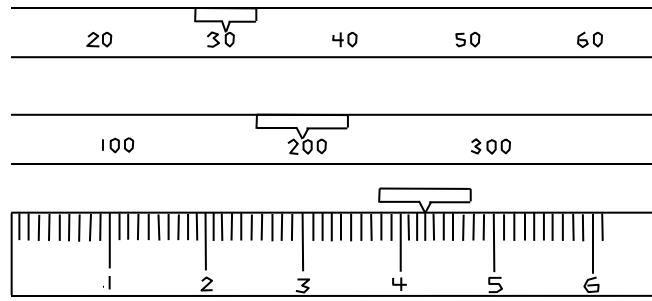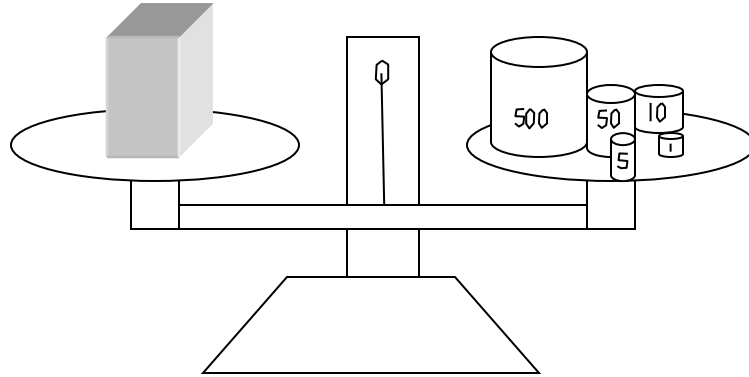26. Pressure _____
27. Would this block sink or float?
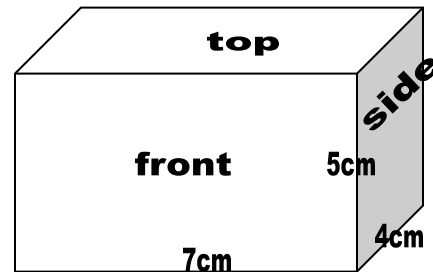
Write the metric prefixes in order (largest to smallest) with their definitions:

28. _____ -- _____
29. _____ -- _____
30. _____ -- _____
31. _____ -- _____
32. _____ -- _____
33. _____ -- _____
34. _____ -- _____

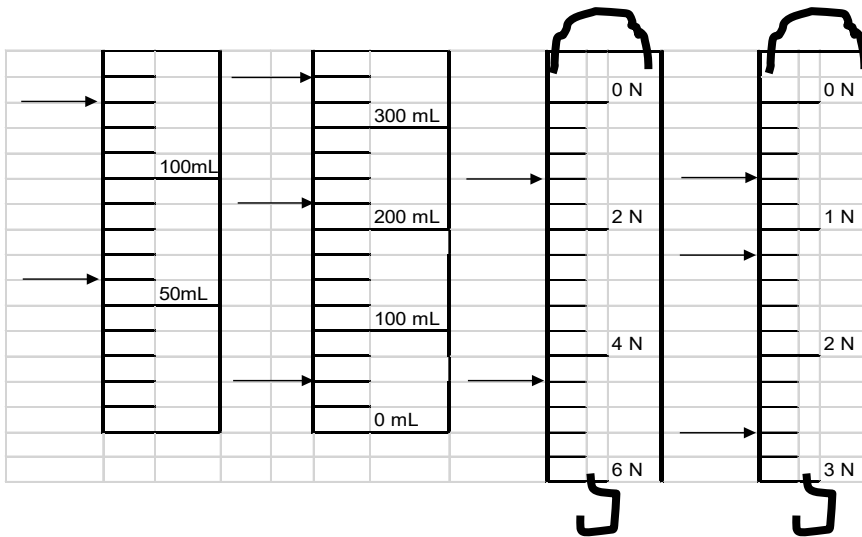35. .03 Km= _____ m

36. 440 L = _____ cL

37. 3.6 mg = _____ cg

38. value? _____ _____

20   30   40   50   60

100   200   300

|1   2   3   4   5   6

39. value? _____ _____

500 50 10
     5   1

40-49 What is the value indicated by the arrow? LABEL

300 mL

100mL

50mL

200 mL

100 mL

0 mL

0 N

2 N

4 N

6 N

0 N

1 N

2 N

3 N

50. What is a **sample size**, and how does that help or hurt a scientific study?

51. What is an **independent variable**?

52. What is a **dependent variable**?

53. What are **controlled variables**?

54. What is a **hypothesis**?

55. What is a **conclusion/argument**?

56. Why do scientists need **evidence**?

SCIENTIFIC METHOD REVIEW

NAME_____ HR___

Two scientists wondered how different drinks affected the teeth of teenagers. They got 300 teenagers who were age 13 to participate in their study, and they monitored their teeth for 10 years. There were 100 teenagers in each group. The participants all brushed their teeth twice per day. They all used the same toothpaste. They all used the same brand of toothbrush.
- One group only drank liquids with no sugar and no fizz, such as water, milk, propel, or sugar free Kool-aid.
- One group only drank liquids with no sugar, but they were allowed to be fizzy, so basically just diet pop and sugar free energy drinks.
- The last group could drink liquids with sugar and fizz, basically any kind of pop or energy drink they wanted.

The results are summarized in the table below:

DRINKS	Average number of cavities at 0 years	Average Number of total cavities by 5 years	Average Number of total cavities by 10 years
GROUP 1 NO SUGAR / NO FIZZ (water, milk, propel, sugar free Koolaid, etc.)	1.2	1.2	1.3
GROUP 2 NO SUGAR but HAS FIZZ (carbonated) (diet pop and some energy drinks)	1.0	2.7	4.8
GROUP 3 SUGAR and FIZZ (regular pop and most energy drinks)	1.1	3.0	5.2

1. What is the scientific question? _____
2. What is the independent variable?   _____
3. What is the dependent variable? _____
4. What are the controlled variables? (3 pts)
   1]_____ 2] _____3] _____
5. Which group is the control group? _____ The experimental groups? _____ and _____
6. How big was the sample size? _____
7. How old were the participants by the end of the study? _____
8. Why did they find the average number of calories before the study even started?
   _____
9. Which group had the best teeth at the end of the study? _____
10. Which group had the worst teeth at the end of the study? _____
11. What is the conclusion/argument? (write a **claim** and back it up with **evidence**) (2pts)
    CLAIM =_____
    EVIDENCE= _____

12. What scientific error(s) may have happened in this experiment? _____
    _____
    _____